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THE PLANT DISEASE REPORTER

Continuation of

THE PLANT DISEASE BULLETIN

Issued By

THE PLANT DISEASE SURVEY

Volume VII Number 2

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BUREAU OF PLANT INDUSTRY

UNITED STATES DEPARTMENT OF AGRICULTURE

THE PLANT DISEASE REPORTER

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Vol. VII July 1, 1923 Number 2.

It will be noted that a change has been made in the name of this periodical. The word "Bulletin" when applied to publications of the United States Department of Agriculture has come to refer to the professional papers known as "Department Bulletins." In order to avoid confusion with these it has been thought desirable not to use the term "Bulletin" for other departmental publications. The name of this periodical will therefore be The Plant Disease Reporter from now on. The numbering of the volumes will be continuous with the Plant Disease Bulletin, and no marked changes in contents or arrangement are contemplated.

ALFALFA STEM NEMATODE MENACING IN THE WEST

The stem nematode (Tylenchus dipsaci) has been known in America for a number of years. It was reported first on rye (Kansas, 1907), then on bulbs (Washington, 1912), later on strawberry and clover, and finally on alfalfa on a single farm at Hermiston, Oregon, in 1921. Subsequent inspection by G. H. Godfrey on 600 acres of adjacent alfalfa showed only slight amounts on the properties immediately adjoining the original infested farm. In 1922 the disease was found to have increased considerably in severity, being very serious in spots, but the infested area had not increased greatly.

It is known that the clover strain of this nematode may be carried with clover seed, and it seems likely that such may be the case with the alfalfa strain. However the Hermiston section does not grow alfalfa for seed so there is comparatively little danger from that source. The hay, however, is sold widely, and there is grave danger of spreading the nematode through this medium.

A report, accompanied by specimens that have been identified by Godfrey, now comes from Collaborator C. D. Learn of Colorado that the disease is quite serious in some fields at Canon City, Colorado. This infestation is remote from the Oregon occurrence and at once suggests the need of a more careful watch for this trouble. Collaborators are asked to report any suspicious cases. A description of the disease will be published soon by the Office of Cotton, Truck, and Forage Crop Disease Investigations.

STEM RUST OF WHEAT

According to L. E. Melchers, stem rust was quite prevalent in southern Kansas about the middle of June, and many fields in the eastern and central parts of the state showed considerable infection at that time.

H. R. Rosen reported, on June 26, that stem rust was more common than usual in Arkansas.

On June 23, Mr. Moomaw of the Dickinson, North Dakota Substation, reported that no stem rust had been noted up to that time.

TWO STATES REPORT ON WHEAT SCAB

Arkansas: Partly blighted heads quite common and often associated with pinkish cushions of Fusarium spores on the glumes. This is the first year that scab has been noted to be so common in this state. (H. R. Rosen, June 26).

Maryland: Not as much as usual due probably to the dry weather all through June. (C. E. Temple, July 1).

LEAF RUST OF WHEAT

As a result of observations at Knoxville, Tennessee, and Washington, D. C., June 10 to 21, E. B. Mains of the Office of Cereal Investigations, makes the following statement:

"I found the leaf rust of wheat at Knoxville, Tennessee, quite heavy, the susceptible varieties being a hundred percent infected. At Washington also there was plenty of rust upon the susceptible wheat varieties. All through this territory, however, the rust appeared considerably later than in the last two years. Here in Indiana, the same appears to be the case.. .. Apparently, therefore, the leaf rust of wheat will cause considerably less damage in the eastern United States than in the previous two years."

According to H. R. Rosen, leaf rust is common but not serious this year in Arkansas, and did most damage to late-maturing wheats.

ANTHRACNOSE OF RYE CAUSING DAMAGE IN VIRGINIA AND SOUTH CAROLINA

Fromme reports (June 15) that anthracnose is rather prevalent and apparently causing considerable damage in the central and southeastern parts of Virginia. The disease was general in South Carolina and in some fields caused blighting of 10 to 15 percent of the plants, according to Ludwig (April 26).

ARTIFICIAL INFECTION OF WHEAT WITH WOJNOWICIA IN NEW YORK

REPORTED BY KIRBY

"In rows of winter wheat inoculated with a pure culture of Wojnowicia graminis in the fall of 1922, a blighting of plants has been observed to occur starting the first part of May and by May 23 mature pycnidia of this organism were collected."

POWDERY MILDEW OF CLOVER

Reports of powdery mildew have come in from collaborators in New York and Iowa, in addition to the states mentioned in Number 1, page 9, of the Plant Disease Reporter. From observations and conversation with pathologists and others in North and South Carolina and Georgia, it was learned that powdery mildew was common in those states where red clover was grown.

MORE APPLE SCAB REPORTS

Good information concerning early appearance of apple scab has been received from four additional states.

New York: Examination of perithecia of the apple scab fungus on decaying apple leaves collected June 12 to 14 from orchards in Genesee and Wayne Counties reveal that many asci are still full of spores and that many perithecia have not yet functioned. Primary infections therefore are still possible. (E. F. Guba, June 18).

Delaware: More serious than usual. Fifty percent fruit infected in one orchard. Mostly primary infection. Five to six leaves exposed early show the infection. Timeliness of spray application very important. Ascospore discharge March 28 in Sussex County. Early Ripe dropping leaves badly from scab. (Adams, June 14).

Maryland: Becoming severe again in the lower counties. In three counties it has been found on the tender twigs as well as on the leaves and fruits. In at least one case the pink bud lime sulfur spray was the determining factor in the control of scab. (Temple & Jehle, July 1).

Maryland: A study of the development and discharge of apple scab ascospores was made by two of my students. The first mature spores were found on April 21. (C. E. Temple, June 15).

Iowa: Apple scab infection on foliage appeared about May 20, in central Iowa. This is somewhat later than usual, due to dry weather and late spring. Infection bids fair to be about as severe as last year. (I. E. Melhus, June, 1923).

BLACK ROT LEAF SPOT

The frog-eye leaf spot of apple has been reported to date from Rhode Island, New York, Delaware, West Virginia, and Iowa. In Rhode Island and West Virginia, it is said not to be abundant as yet. Browning states that in the former state this situation is "in contrast to last year, when several cases of heavy defoliation were caused by this disease early in the season." (June 8). According to Adams (June 14) the leafspot is very prevalent in Delaware, and Melhus states that it is severe in central Iowa.

APPLE DISEASES IN VIRGINIA

"The disease situation is sub-normal in development at this time. Scab has appeared in only slight amounts as yet as rains have been few in most sections since development of leaves and fruit began. Cedar rust will probably not be as severe as usual. Fire blight is attracting some attention but is not causing much injury. Powdery mildew unusually prevalent. Frog-eye severe in southwest in unsprayed home orchards." (Fromme, June 15).

APPLE BLOTCH

Thus far this season, apple blotch has been reported from Delaware, Georgia and Illinois. In Delaware it was first found on June 6. In Georgia the disease was observed on Northwestern Greening at the Experiment Station on June 22 by Higgins and Haskell. From Illinois, H. W. Anderson reports as follows:

"Blotch reported on Duchess fruit at Hardin (Calhoun Co.) by Broch on May 24. This was only about 2 1/2 weeks after petal fall; abundant on Ben Davis fruit and petioles at Olney on June 7 and evidently at least 5 days old at that time. This would indicate infection not later than 2 weeks after petal fall." (June 9).

POWDERY MILDEW ON APPLE

Powdery mildew has been reported as common on apples in Monroe County, New York. According to the News Letter of the Arizona State Commission of Agriculture and Horticulture, this disease is thought to be responsible for a light set of fruit in one orchard observed near Bowie, and it is also quite serious near Paradise. The following report indicates that it is causing damage in Colorado. It will be noted from the Virginia report quoted above that the disease is unusually prevalent in that state.

"This disease is causing some alarm among the fruit growers of Delta County. Early in the year it was reported on the branches in the perfect stage; now it is very abundant on the leaves and the young fruits in the conidial stage. The infection is so severe that it is causing the leaves to curl, and it is hoped conditions will soon check its spread." (C. D. Learn, June 7).

POWDERY MILDEW ON PEAR IN COLORADO

"The disease is more prevalent on the fruit of the Anjou pear than any other variety; likewise it is more prevalent on the fruits of the pear than that of the apple. So far the disease is not as severe as on the apple." (C. D. Learn, June 7).

POWDERY MILDEW ON PEACH REPORTED FROM ILLINOIS

"Specimens received from Norris City, Illinois. So far as I can determine, this is the first report of this disease from Illinois. These are year old trees and two trees in orchard are affected. Probably introduced on nursery stock." (H. W. Anderson, June 9).

BROWN ROT BLOSSOM AND TWIG BLIGHT ON PEACH

Maryland: About as usual. Very severe in the coastal plain counties. We get fair control with self-boiled lime sulfur applied when the buds are pink. (C. E. Temple, July 1).

Ohio: The period of drouth throughout May and early June is responsible for less blossom blight and twig blight upon susceptible varieties than is usually the case. Greater difficulty is experienced in finding fruiting bodies upon mummied fruit under trees this year than normal. It is possible that this condition will present a greater liability for brown rot infection later in the season. (R. C. Thomas, June 15).

SOFT ROT OF STRAWBERRY REPORTED FROM ARKANSAS

"Very heavy loss occurred this year, doubtless associated with excessive amount of rainfall during fruit development. Disease particularly bad in low, poorly-drained fields. Rot occurring in fields and developing further during transportation. Symptoms on fruit very much like published descriptions of "leak" due to Rhizopus but of the numerous berries examined Rhizopus was rarely found while a fungus, not carefully studied, resembling Botrytis, was commonly found in infected fruit. Infections in the form of brown discolorations occurred on ripe as well as green berries, the discoloration often extending down the peduncles." (H. R. Rosen, June 26).

SLIME MOULDS OF STRAWBERRY REPORTED FROM KANSAS

"Owing to the extremely wet May and June that we experienced, slime moulds were very common on strawberries this season. Specimens were received from all parts of the state and the slime moulds in some cases completely covered leaves and petioles. Correspondents claimed that they were smothering out the strawberries over considerable areas.

"Last year a species of Fuligo was very common. This year a species of Didymium is present almost to the exclusion of all other moulds." (R. P. White, June, 1923).

TWO GOOSEBERRY DISEASES REPORTED FROM KANSAS

"A very heavy infection of rust caused by Puccinia Pringsheimiana was observed on gooseberry bushes in Manhattan, Riley County. The leaves, fruit, petioles, and fruit pedicels were all attacked. A large percentage of the fruit was rendered worthless due to the aecia upon them causing distortion and injury. As far as known this is the first report of this rust from Kansas."(Richard P. White, June 12).

"Leaf spot caused by Septoria ribes Desm. was found causing defoliation of gooseberry bushes in Wyandotte County. As far as known this is the first report of Septoria ribes from Kansas." (Richard P. White, June 22).

EARLY BLIGHT OF POTATO REPORTED FROM SOUTH CAROLINA AND LOUISIANA

South Carolina: General over eastern part of state. Several fields blighted severely resulting in a decreased yield of about 10%. Damege in most cases slight. (W. D. Moore, May 25).

Louisiana: Heavy infection in some fields, shortening the growing period from a week to ten days. Most sections infection only moderate. (C. W. Edgerton, June 9).

DISEASES OF TOMATO AS REPORTED FROM MISSISSIPPI

"Early blight first reported from Copiah County on April 4. Following this numerous reports from various portions of the state where the disease was serious in tomato beds. The disease is probably prevalent throughout the state. In the main tomato section of the state, in Copiah County, the disease is serious on unsprayed plants." (D. C. Neal, June 15).

"Date of first report of wilt on May 24 in Copiah County. The disease was general throughout the trucking section of this county and has been reported from various other sections of the state. It does not seem to be causing much damage to commercial growers but is quite serious with small gardens on soil that has been grown in tomatoes repeatedly." (H. D. Barker, June 15).

"Southern blight reported from Peark River County, June 9th. The disease was apparently rotting off at the crown plants that were fully two thirds mature. The damage caused by the disease was about 1%." (D. C. Neal, June 15).

"Mosaic first reported May 28 from Copiah County. Serious in one field. The disease has also been reported from Oktibbeha County." (H. D. Barker, June 15).

REPORTS ON BEAN DISEASES

Bacterial blight (Bacterium phaseoli), Louisiana - considerable present but less than the average for the past few years. (Edgerton, June 9).

Anthracnose (Colletotrichum lindemuthianum) - According to Neal, this season has been favorable to this disease and it has caused severe damage in several counties in Mississippi, where it was first noticed on April 27. Edgerton reports more than for the past few years in Louisiana. He states that "Considerable seed was purchased that showed rather heavy anthracnose infection."

Dry root rot (Fusarium sp.) - reported from Washington as follows:

"A dry root rot of bean, apparently identical with the disease described in Cornell Memoir 26, 1919, has been found causing severe injury in one field at Spokane." (F. D. Heald, June 7).

ONION SMUT REPORTED FROM MINNESOTA FOR THE FIRST TIME

"Found for first time in this state in Ramsey County, June 7. Grower stated that it had been in his field for seven or eight years but he had

confused it with maggot injury. About 60 percent of plants infected. Field had grown onions for about ten years. One year rotation apparently had no effect. Copper carbonate seed treatment was ineffective. The season apparently was ideal for the development of the disease." (Sect. Plant Path., June 10).

CABBAGE DISEASES REPORTED FROM MISSISSIPPI AND MARYLAND

Yellows caused by Fusarium conglutinans

Mississippi: Cabbage yellows was first reported on April 30th from Washington County. It has since been reported from Oktibbeha and several other counties throughout the state. Around Crystal Springs in Copiah County where most of the cabbage in the state is grown the disease was extremely serious this year. In several fields over 95% infection was found. The unfavorable growth conditions during the past spring have added to the seriousness of the disease. Many fields on new soil, however, showed slight injury. (H. D. Barker, June 15).

Maryland: Seems to be increasing; 20-50% losses are more common than formerly. (C. E. Temple, July 1).

Soft rot caused by Bacillus carotovorus

Mississippi: This disease was found to be quite prevalent in the cabbage growing section around Crystal Springs in Copiah County on May 23rd. The excessive rains have added to the seriousness of the disease. The growers reported that several cars had been lost in transit due to soft rot. (H. D. Barker, June 15).

Black-rot caused by Bacterium campestre

Mississippi: Reported from Rankin County on May 18th as causing 50% damage in a field of three acres. The disease has also been reported from Afams, Hinds, and Copiah Counties. (D. C. Neal, June 15).

Stem canker caused by Phoma lingam

Maryland: Reported from several places in the State as causing considerable loss. (C. E. Temple, July 1).

DOWNY MILDEW ON SPINACH

Connecticut: Have seen fields of one grower where this disease has been quite serious and have heard of another grower whose crop was ruined. These are first reports in this state where the disease has been serious, as it has only been reported a few times before in previous years. Had one car load shipped from Texas where serious wet rot followed this disease as the starting cause. (G. P. Clinton, June 1).

New York: Dry weather has checked the spinach mildew in Wayne County, and the earlier plantings will make a fair yield but later ones are turning yellow and some of them will scarcely be worth harvesting. Lamb's quarter is abundant along the ditches and quite commonly affected with the same fungus, Peronospora effusa. (A. G. Newhall, June 18).

REPORTS ON NEW YORK LETTUCE DISEASES

"The Fulton, Elba and Wayne County Sections had excellent prospects until a week ago when the temperature went up to 90 or better for several days in succession. Nearly every field I have been around Williamson is now showing from fifteen to eighty-five percent of the heads more or less affected with tip burn or scald as a consequence. Shipments from Orange County, I understand, are showing similar condition. There is some evidence that lettuce grown on newer muck is less affected and even on older muck where less potash was used there seems to be less burning. Shipments commenced from here this week but so far very little first class "stuff" has been cut and there will doubtless be very little real clean lettuce cut around here for a week or ten days, as so much has been scalded.

"Mosaic was present on all lettuce to the extent of about three to six percent. It very evidently came with the seed.

"A wet week the fore part of June with low temperature resulted in an unusual amount of lettuce "Stunt" caused by a species of Pythium presumably. It ran up to ten percent in one or two fields. It is only present in wet cool weather and was very scarce last year and year before, but was present in Oswego, as well as Wayne County this season." (A. G. Newhall, June 30).

TOBACCO WILDFIRE IN MARYLAND AND NEW YORK

"We have made a fairly thorough survey in four tobacco growing counties, namely, Prince Georges, Charles, and Anne Arundel, and wildfire has been found in almost every seed bed inspected. We have no less than fifty cases at the present time, but no doubt there are hundreds that have not been called to our attention. The disease has been spreading during the last three years, but this is by far the worst case that we have had. The growers are very much disturbed about the presence of the disease. The dry weather that has prevailed during the past ten days has had a tendency to check the spread of wild-fire, and this, together with a very thorough spray of Bordeaux Mixture, 3-4-50, seems to have checked the disease, at least temporarily." (C. E. Temple, June 6).

Of 48 tobacco seed beds inspected for wildfire by H. E. Thomas at Big Flats, Chemung County, New York, on June 12, 24 were healthy, 9 were slightly infected, 6 moderately so, in one bed infection ranged from moderate to severe, and in 8 the disease was severe.

CYTOSPORA CHRYSOSPERMA DESTRUCTIVE TO POPLARS IN OHIO AND MINNESOTA

Ohio: Reports just received from Chillicothe, Ross County, indicate that there has been a serious invasion of Cytospora canker in a block of young cottonwoods (Populus deltoides), on the plantation of the Mead Pulp & Paper Company. This is the only report so far received of this disease in Ohio. (Freda Detmers, June 15).

Minnesota: Several clumps of trees (Populus tremuloides) in Ramsey County found dead or dying on June 3. (Sect. Plant Path., June 10).

FROST INJURY TO MAPLES IN OHIO AND ILLINOIS

Ohio: Widespread damage was done to sugar maples in particular and other hardwood trees by the snow storm and severe frost of May 10th throughout central, northern and eastern Ohio. Though a large number of varieties of shade trees were damaged, the sugar maple suffered the greatest injury. The young leaves in the tops of the trees had just developed and were killed by the frost. Buds in the other parts of the trees were swelling, so that the frost injured the leaves within. (Freda Detmers, June 15).

Illinois: A great many complaints have been received concerning leaf injury to maples during the spring. At Peoria, Springfield and Galesburg this was manifested by a dead area on the petiole about 1 inch below the blade. The area was localized being about 3 mm. in length. In other cases the edges of the leaves were brown, caused by cold high winds on May 7 and 8 when snow fell in many localities. (H. W. Anderson, June 9).

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